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THE PLANT DISEASE REPORTER

Continuation of

THE PLANT DISEASE BULLETIN

Issued By

THE PLANT DISEASE SURVEY

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THE PLANT DISEASE REPORTER

Continuation of the Plant Disease Bulletin

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THE PLANT DISEASE SURVEY

Vol. VII August 31, 1923 Number 6

ILLINOIS AND OHIO REPORT ON CORN DISEASES

Smut (Ustilago zeae):

Illinois: Infection is, as usual, general. It has been noted especially in Iroquois, Calhoun, Dewitt, Logan, Piatt, Montgomery, Champaign, McLean, St. Clair, Monroe, Adams, Gallatin and White counties. The number of infected stalks has varied from a trace through one and two per cent to 15 and 25% with 10% not uncommon. (Tehon, Aug. 15)

Ohio: The dry weather of mid-summer in many sections of Ohio has not favored the spread and development of this disease. (Thomas, Sept. 1)

Bacterial wilt (Aplanobacter stewartii):

Illinois: Is generally prevalent in sweet corn. First seen June 23, in adams county where examination of 3 small fields showed from 5 to 30% of the stalks rotted. A 3 acre field in Union county had between 60 and 90% rotted stalks. (Tehon, Aug. 15)

Ohio: Becoming more general each season both in home gardens and in truck plantings of sweet corn. In many instances serious loss occurs. (Thomas, Sept. 1)

Root rot (Diplodia zeae):

Ohio: Serious in many fields of sweet corn where special care was not given to selection and testing of the seed corn. (Thomas, Sept. 1)

Bacterial stalk rot (Pseudomonas dissolvens):

Illinois: An examination of a hundred acres in Alexander county on July 28 revealed 2 plants evidently infected with Rosen's disease. (Gehon, August 15)

Brown spot (Physoderma zeae-maydis):

Illinois: Found this season as far north as Peoria Common and somewhat serious southward. All plants seriously infected in one field in Pope county, 10% in a 30 acre field in Monroe county, and 14 acres and 7 acres in Gallatin county showed 40% and 80% infection. (Tehon, August 15)

BACTERIAL SPOT OF COWPEA NOW REPORTED FROM THREE STATES

Bacterium vignae Gardner and Kendrick, recently described on cowpea (Science 57: 275. March 2, 1923), is now reported from Kansas by R. P. White and from Florida by W. B. Tisdale. Specimens of the disease from these two localities have been received by Gardner and by the Plant Disease Survey.

ALFALFA ANTHRACNOSE SERIOUS AGAIN IN MISSISSIPPI

A report from the Section of Plant Pathology of the Mississippi Agricultural Experiment Station, dated August 1, states that anthracnose has been reported from a number of counties in Mississippi and that in certain localities many fields have been abandoned because of the seriousness of this disease.

Is this disease occurring in other states, and if so, is it causing any damage? It is not unlikely that anthracnose may be causing losses in states adjoining Mississippi.

BROWN ROT OF STONE FRUITS

Apparently brown rot (Sclerotinia cinerea) has not been such an important factor as usual in reducing the quantity and quality of stone fruits. The accompanying reports, which have recently been received, give more detailed information concerning the situation in a number of states.

Peach:

New Jersey: Present in some parts of the state but not severe. (Dept. of Plant Pathology, Aug. 15)

Pennsylvania: This disease is unusually light throughout the state this year, but is causing considerable damage in locally restricted areas. (Thurston, August 20)

Delaware: Brown rot of fruit has been more prevalent than in 1921 and 1922. The past three weeks have shown a conspicuous increase of disease in both dusted and sprayed orchards. The Hale, Early Elberta and Elberta varieties show greater prevalence of infection. (J.F.A., Aug. 15)

Alabama: Very destructive where spraying not practiced. Loss 20%. (Miles, Aug. 15)

Mississippi: Date of first report June 26th - Clark County. The Georgia Belle peach orchard at Enterprise, Mississippi was seriously affected by the disease. Also observed at A. and M. College on August 15, on the late varieties of peaches. Present also in the other parts of the state where timely spraying has not been carried out. (Sec. of Plant Pathology, Aug. 15)

Texas: Very prevalent - 3% loss - crop very short due to late spring freeze. (Taubenhaus, Aug. 15)

Arkansas: Very prevalent around Fayetteville. (Young, Aug. 15)

Ohio: Much less serious this year than normal. (Thomas, Sept. 1)

Peach:

Michigan: Dry weather at the blossoming time gave condition which produced almost no early attack of the brown rot fungus. (Bennett, July 1)

Plum and prune:

Connecticut: Apparently less than usual, due to dry weather. Have had no complaints yet. (B. P. C., Aug. 1)

New Jersey: Brown rot (Sclerotinia cinerea) present but not severe. (Dept. of Plant Pathology, Aug. 1)

Pennsylvania: This disease is unusually light throughout the state this year, but is causing considerable damage in locally restricted areas. (Thurston, Aug. 20)

Ohio: Losses from rot of stone fruits are decidedly below normal up to this time. (Thomas, Aug. 1)

Wisconsin: Perfect stage observed on mummies on ground under plum trees in Experiment Station orchard. Very scarce. (Vaughan, June 5)

Wisconsin: This disease is present where fruit production is heavy and local rains are plentiful. There has been a relatively dry season in most of the state, so losses are light. (Vaughan, Aug. 1)

Minnesota: Very little until the last two weeks when rains appeared at the same time as ripening of fruit, at which time the fruit is most susceptible. Now found practically everywhere but in small amounts. More or less serious on Sand Cherry hydrids. (Sec. of Plant Pathology, Aug. 1)

ROOT KNOT OF PEACH IMPORTANT.

That root knot of peach, caused by Heterodera radicicola, is a serious disease in some of the southern states, is emphasized by the following reports.

South Carolina: Observed in a few young orchards in areas that had previously been in garden or sweet potatoes. Severe in such patches but practically absent in other parts of the orchards. (Ludwig, July 1)

Alabama: Important - many orchards have some affected trees. Loss probably 5%. (Miles, Aug. 15)

Mississippi: Root knot is the most serious disease of peaches, both nursery stock and bearing trees, with which the peach grower has to contend in Mississippi, especially so in the south Mississippi counties. It is present in varying amounts in many nurseries throughout the state, and doubtless three-fourths of the bearing trees in the coastal counties are infected by root knot. On May 12 a young orchard was observed at Lucedale, Mississippi, which revealed almost a hundred per cent infection. At least twenty-five per cent of the trees had been killed by the disease. (Sec. of Plant Pathology, July 1)

... Chair and Peoria

BACTERIAL SPOT CAUSES LOSSES TO PEACHES IN THE SOUTH

Alabama: Leaf and twig injuries rather common - severe defoliation in some cases. Fruit spot observed in few cases. Loss probably less than 1%, though hard to estimate, when one considers the resulting lowered vitality of the trees. (Miles, Aug. 15)

Mississippi: Date of first report May 26 -- Lauderdale county -- damage serious, resulting in partial defoliation of the trees. Also observed in Pearl River county on July 9. Damage very severe on the early varieties such as Greensboro, Carman, Mayflower and other early peaches. Many of these trees were about 75% defoliated early in July. (Sec. of Plant Pathology, Aug.15)

Arkansas: Very common on leaves and less common on fruit in rundown orchards. (Young, Aug. 15)

EARLY BLIGHT OF POTATO

Connecticut: Only two reports - no damage - apparently less than usual. (G. P. C., Aug. 1)

New Jersey: Early blight (Macrosporium solani) - a large number of fields have been examined and none of this trouble has been found. (Martin, Aug. 1)

Louisiana: Early blight rather abundant towards the end of the season though most of the crop was harvested before it was important. (Edgerton, Aug. 1)

Ohio: Of slight economic importance this year. (Thomas, Sept. 1)

Illinois: This disease is general and often severe in its injurious effects. Scarcely a plant escapes its attack. A loss of 5% is rather common and total losses in small patches are by no means rare. (Tehon, Aug. 1)

Minnesota: In Lake of the Woods county very prevalent, the lower leaves of plants in many cases being entirely destroyed - estimated 10 - 15% of leaf area. Trace to 10% elsewhere in state. (Sec. of Plant Pathology, Aug. 1)

South Dakota: Early blight showing up on potatoes. (Evans, July 30)

POTATO LEAFROLL REPORTS

Connecticut: Apparently an average amount or more. (G. P. C., Aug. 1)

New Jersey: Leafroll, common and severe on the Irish Cobbler variety, present in every field examined, amounting in one case to 85%. One field of 40 acres, planted with American Giants, was observed in which 90% of the crop showed severe leafroll. (W. H. Martin, Aug. 1)

Potato Leafroll Reports:

Ohio: Is quite prevalent where hill selection of seed potatoes has not been practiced. (Detmers, Aug. 1)

Minnesota: Trace on Cobblers, Triumph and Green Mountain. (Sec. of Plant Pathology, Aug. 1)

THREE MORE STATES REPORT LATE BLIGHT OF POTATO

Massachusetts: Reported from Bristol county by Doran - slight damage. The first and only case noted this season. (Osmun, Aug. 15)

Pennsylvania: Appeared August 1 in Somerset county and since has been found in several of the higher counties of the state. From Fulton county, August 11, this is the first authentic report of late blight in this county, though undoubtedly it has existed there in past years. Two weeks of cool wet weather around the first of August was very favorable for this disease but drier weather since has somewhat checked it. Has not been found so far on any sprayed fields. (Thurston, Aug. 20)

North Carolina: The crop of mountain seed potatoes was practically free from late blight when examined in late July. Two fields out of thirty-odd inspected, July 20 to 30, for certification, showed noticeable infection. (G. W. Fant, Aug. 25)

THREE REPORTS ON RHIZOCTONIA OF POTATO

North Carolina: Very prevalent in the mountain section of the state. A reduction in yield of from 5 to 10% has resulted. (G.W.Fant, Aug. 25)

Minnesota: Generally abundant through the Red River Valley and doing considerable injury. Perfect stage abundant in Clay and Polk counties - more or less prevalent in other sections of the Red River Valley. Perfect stage also found on Peat soil in Anoka county this year. (Sec. of Plant Pathology, Aug. 1)

California: Common in all sections of the state and especially destructive this year, due to the cool season prevailing. In the Los Angeles district, loss was heavy in many fields where the seed had been properly dipped in corrosive sublimate. These fields had either been planted to potatoes or Lima beans the preceding season. Soil infection seems to be general, and the severity and prevalence of the disease seems to be correlated with spring temperature in the various districts. (Rosa, Aug. 22)

POTATO MOSAIC REPORTED FROM CALIFORNIA

Mosaic occurred in most sections of the state on the early crop. A heavy infestation of aphids late in April was responsible apparently, for much

POTATO MOSAIC REPORTED FROM CALIFORNIA - Continued

secondary infection. The so-called British Queen variety seems to be highly resistant - at least the disease could not be detected on this extremely vigorous variety. The White Rose variety is very susceptible. One strain of this variety planted February 26, showed an average mosaic infection of 36%. The same strain planted April 1, and not germinating until after the aphids disappeared, showed only 10% mosaic.

The mosaic disease is rapidly becoming more serious in California, due to the susceptibility of the commercially important varieties, to the general presence of aphids in the spring of the year and to the failure of seed growers to perform their roguing early in the season. The latter operation has too generally been deferred until the crop was practically mature. (Rosa, Aug. 22)

STEM ROT OF SWEET POTATO CAUSES DAMAGE

Apparently decreasing in Mississippi

New Jersey: The stem rot disease has caused heavy loss of sweet potatoes this year. In some fields the loss has been less than 2%. In a large number of fields, especially in Gloucester, Camden and Burlington counties, there has been a loss of 10 to 30 % and in a 5 acre field near Swedesboro the disease has destroyed 85% of the Yellow Jersey variety. (Poole, Aug. 15)

Delaware: Has been very severe, particularly during the early growth producing what is called locally the "split stem." Very few uniform fields in the state. Some fields show 50% missing stand from this disease. (J. F. A., Aug. 15)

Alabama: Not observed on Triumph variety - 5% loss on Porto Rico. (Miles, Aug. 25)

Mississippi: Date of first report June 14 -- Escatawpa, Mississippi. This particular grower sent in specimens and reported many plants dying in the fields. On the whole, this disease is decreasing all over the state, and the cause for this is no doubt due to the fact that the growers are becoming extremely interested in this state in planting only certified seed. (Sec. of Plant Pathology, Aug. 15)

Illinois: Reports from 9 counties indicate a general prevalence of this disease in Illinois this season. (Tehon, Aug. 15)

DELAWARE AND NEW JERSEY

REPORT SOIL ROT (CYSTOSPORA BATATA) OF SWEET POTATO

Delaware: Infection found on young fleshy roots at Houston, Aug.13. (J. F. A., Aug. 15)

New Jersey: As early as June 27, the "Pox" (soil rot) disease had caused some damage to sweet potatoes. In a large number of infested fields on Aug. 20 the disease had attacked more severely in some spots than in others. In many spotted areas in the fields the disease had nearly destroyed the entire root system, causing yellowing of the leaves and stunting of the vines. (Poole, Aug. 15)

SWEET POTATO MOSAIC APPEARS IN KANSAS

Traces of mosaic in a field of Nancy Hall sweet potatoes at Manhattan, Kansas, have been reported by E. A. Stokdyk. This is the first report for Kansas. The other states that have reported the disease are Arkansas and Texas.

BLOSSOM-END ROT OF TOMATO

New Jersey: There has been heavy loss of tomatoes of all varieties this year due to this disease. It has been destructive to both field and greenhouse tomatoes. A good many complaints have been received from the various localities of the state in regard to its prevalence especially in small gardens and greenhouses. It is worse this year than during the past four years. The seriousness of the disease is attributed to the dry weather conditions. (Poole, Aug. 1)

Delaware: Early set tomatoes show considerable prevalence of this disease in the northern part of the state because of prolonged drought periods. (J. F. A., Aug. 15)

Mississippi: First reported on May 25 in the main trucking section around Crystal Springs in Copiah county. General in that section. Most serious disease of tomatoes in this section. (H.D.Barker, June 15)

Louisiana: Caused some loss in some localities but not particularly troublesome this season. (Edgerton, July 15)

Texas: Very prevalent. (Taubenhaus, July 15)

Arkansas: Common in small amounts. (Young, Aug. 1)

Ohio: Occurrence about normal. (Young, Aug. 15)

Illinois: Reported from the truck regions in St. Clair and Peoria

Blossom-end rot of tomato:

Illinois: (Continued)
counties. On June 29 it was not yet serious near Peoria, but about July 20 examination in two large greenhouses and an acre outside showed an average of two diseased fruits per plant. (Tehon, Aug. 15)

Minnesota: Less than usual. (Sec. of Plant Pathology, Aug. 15)

TOMATO MOSAIC

Ohio: Much more prevalent than last season both in the greenhouse and in the open. (Young, Aug. 15)

Illinois: We have not had any reports of this disease being serious this season. (Tehon, Aug. 15)

Minnesota: Infection general, 50 - 95% in many fields. Damage usually not great - mostly late infection - but a few fields observed where yield was reduced 10 - 20%. (Sec. of Plant Pathology, Aug. 15)

Iowa: 25% of crop infected. (Melhus, Aug. 15)

FIRST REPORT OF BUCKEYE ROT (PHYTOPHTHORA TERRESTRIA) OF TOMATO FROM WEST VIRGINIA

Although buckeye rot has been observed in West Virginia for the past six years, it is not until this season that the disease has actually been reported to the Plant Disease Survey.

West Virginia: This disease was first noted in our pathological garden at Morgantown in 1917 and has appeared annually ever since. Considerable damage was done to the crop in the horticultural plots the last three seasons.

This disease has not been observed in any other part of the state. (Berg, Aug. 15)

SEPTORIA LEAFSPOT OF TOMATO

Delaware: Many fields are showing considerable defoliation from this disease but it has not appeared in such a severe outbreak as in 1922. (J. F. A., Aug. 15)

Ohio: Noted as rather serious in Central Ohio, more in evidence than last season. (Young, Aug. 15)

Septoria leafspot of tomato: (Continued)

Illinois: We have had no reports of this disease being serious. In Marion county about 10% of the leaves on each plant in a small patch were spotted. In Morgan county the infection was less, and in Alexander county only a trace was found in examining about 2 acres. (Tehon, Aug. 15)

Minnesota: Universally present in about usual abundance. Damage not great. (Sec. of Plant Pathology, Aug. 15)

Iowa: Prevalence general but little damage. (Melhus, Aug. 15)

Arkansas: Common but not causing serious damage. (Young, Aug. 1)

New Mexico: Has been found in Dona Ana Co. (Crawford, Aug. 22)

FUSARIUM WILT OF TOMATO COMMON THIS YEAR

Delaware: The most important disease in the commercial fields this season. Prevalence considerably more than in 1921 and 1922. Some fields have shown as much as 30% infection. (J. F. A., Aug. 15)

Arkansas: Prevalent throughout tomato growing sections of the state and causing considerable loss. (Young, Aug. 1)

Ohio: Fusarium wilt is becoming more wide spread and destructive year after year, both under glass and in the open. Many reports have been received from practically all sections of the state. Resistant varieties for the open and soil sterilization for the greenhouse have been found effective for its control. (Young, Aug.15)

Illinois: First report was on June 25 from Peoria. In a large greenhouse not less than 5% of the vines were diseased and the fruit loss was serious. Further reports from Christian, Clinton, St. Clair, Tazewell, Union, Massac, Williamson and Wabash counties indicate the seriousness of the disease by showing infections varying from 5 to 90% of the vines. 10% is commonly reported. It is likely that wilt will be responsible for a crop reduction of not less than 10%. (Tehon, Aug. 15)

Illinois: (Peoria truck and small fruit section) "In three fields of tomatoes, wilt ran 10 to 20%, 30%, and 40 to 70% respectively." (Yount, Aug. 16)

Minnesota: Recorded for the first time for the state. Damage 10 - 20% in the one field in Hennepin county where it was observed. (Sec. of Plant Pathology, Aug. 15)

Iowa: In intensive tomato growing section around Muscatine and Burlington, 5%. For state less than 1%. (Melhus, Aug. 15)

New Mexico: Tomato wilt is doing lots of damage in parts of the state. (Crawford, Aug. 22)

MOSAIC OF CANTALOUPE

Ohio: Only a few cases noted, prevalence about normal. (Young, Aug. 15)

Illinois: Has been reported from Christian and Union counties. In Union county a small field of Rocky Ford showed 30% of the plants infected, the infection resulting in such severe stunting that the vines scarcely had a spread of 30 inches. (Tehon, Aug.15)

Wisconsin: A few specimens received at the laboratory. (Vaughan, Aug. 15)

Iowa: Wherever cantaloupes are grown. (Melhus, Aug.15)

DOWNY MILDEW OF CANTALOUPE

South Carolina: The entire crop of cantaloupes in South Carolina was killed by mildew this year. Only a small number of cars were shipped and these of inferior quality due to the disease. It was first noted near Blackville on June 21 and by July 10 all fields were dead. On several demonstration plots the disease was easily controlled by four applications of a 4-4-50 Bordeaux mixture. (Moore, Aug. 15)

Alabama: Present, but not especially injurious in most instances. Yield probably reduced 2%. (Miles, Aug. 15)

Mississippi: Reported the latter part of July on the Horticultural plot of the Experiment Station. Damage severe. Also observed in other parts of Oktibbeha county. (Sec. of Plant Pathology, Aug. 15)

WATERMELON DISEASES

Blossom-end rot (probably non-parasitic)

Delaware: Very prevalent this season as compared with last year. (J. F. A., Aug. 15)

Alabama: Rather common - 2% loss. (Miles, Aug. 15)

Texas: Very prevalent, due to prolonged dry weather. This disease is causing considerable loss - 3% loss. (Taubenhaus, Aug. 1)

New Mexico: Is present to quite an extent in Dona Ana Co. (Crawford, Aug. 22)

WATERMELON DISEASES - Continued

Anthracnose (Colletotrichum lagenarium):

Delaware: Anthracnose very prevalent on fruit. Have observed very little leaf infection to date. (J. F. A., Aug. 15)

South Carolina: Anthracnose was general throughout South Carolina this year. In the eastern part of the state it was very severe, causing a 90% loss in some cases and a general loss of about 30%. Spraying with a 4-4-50 Bordeaux mixture gave a good control wherever used. Satisfactory results were also obtained with a copper lime dust. (Moore, Aug. 15)

Alabama: General and serious. Average loss probably 10%. Loss in one instance reported as high as 75%. (Miles, Aug. 15)

Mississippi: Date of first report July 1 -- Hattiesburg, Mississippi. Also reported during July and August from Oktibbeha, Pearl River, Jones, Harrison, Lauderdale, Clay, Hinds and Lincoln counties. Many fields have been reduced in yield, and many plants have been killed by the attacks of this fungus. Much fruit infection has also been noted. The abundant rainfall that has occurred in the state has undoubtedly been very favorable for the development of this disease. (Sec. of Plant Pathology, Aug. 15)

Texas: Prevalent in transit - 1% loss. (Taubenhaus, Aug. 1)

Fusarium wilt (Fusarium niveum):

Alabama: Not common, but locally severe. (Miles, Aug. 15)

Texas: Prevalent and serious on old land - 4% loss. (Taubenhaus, Aug. 1)

Illinois: Watermelon wilt is killing 75 to 100% of the plants in 2 acres of an 8 acre field of Monte Christo melons. Growers say whole fields in Woodford county have been killed by this fungus. (Young, Aug. 16)

New Mexico: Some fields of watermelons have been a total loss due to Fusarium niveum. One grower sent in specimens of diseased vines and reported that he had a field of 3000 hills where the loss would run 90%. (Crawford, Aug. 7)

Arizona: The first watermelon wilt of the 1923 season was observed in a small planting near Scottsdale on June 8. It was stated that the same soil had produced a crop of melons for the two years previous, but it was evident no crop would be harvested during 1923 as the loss was complete. (Arizona State Comm. Agri. & Hort. News Letter, June 30)

WATERMELON DISEASES - Continued

Fusarium wilt (Fusarium niveum):

California: Was found in Imperial Valley, near Calexico, June 23. About 20% infection on 40 acres. Specimens of this trouble have recently been received from several places in the Los Angeles district. (Rosa, Aug. 22)

CHESTNUT BLIGHT SPREADING IN THE SOUTH

by

G. F. Gravatt

Recent inspection work in Virginia and North Carolina indicates that the chestnut blight, Endothia parasitica, is spreading just as fast, or even faster, in the South than it did in the North. The main area of infection, that is the zone in which 80% of the trees are infected, has now reached North Carolina on the eastern slope of the Blue Ridge Mountains. The disease has been spreading westward across the mountains much slower than on the eastern slope of the Blue Ridge.

A previously unknown infected area has just been found covering parts of Greenville County, South Carolina, and Henderson and Polk counties in North Carolina. This large infection is many miles ahead of the main line of advance of the disease. How this advance infection started is not known. This infection is rapidly spreading out and small spot infections are undoubtedly present in other counties of North and South Carolina and in northern Georgia. Small spot infections are quite numerous in Transylvania county, North Carolina. The chestnut growth of the southwestern part of North Carolina, northern Georgia and the southeastern part of Tennessee will be killed sooner than previously estimated.

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